

Welcome to

TPCP UCLA/UC Irvine Project Kickoff Meeting
Eng VI, Room 289 on Friday January 26th, 2018
University of California, Los Angeles
404 Westwood Plaza, Los Angeles, CA 90095

Jan 26, 2018

Eng VI, Room 289

8:30am-9:00am

Breakfast (outside of Room 289)

9:00am-9:05am

Introduction, Miryung Kim (UCLA CS)

9:05am-10:20am

ONR TPCP Program and UCLA and UCI Project Overview
20 minutes each including questions

- *ONR Perspectives on TPCP (Total Platform Cyber Protection)*, Sukarno Mertoguno and Ryan Craven (Office of Naval Research)
- *Overview of Synergistic Software Customization: Framework, Algorithms, and Tools*, Miryung Kim (UCLA CS)
- *Layering and Partial Evaluation for Java Bytecode*, Jens Palsberg (UCLA CS)
- *Overview of the Debloating Research at UC Irvine*, Harry Xu (UC Irvine CS)

10:20am-10:35am

Break

10:35am-12:05pm

Current Projects at UCLA and UC Irvine

15 minutes each including questions

- *Compiler and Runtime Support for Efficient and Scalable Big Data Systems*, Khanh Nguyen (UC Irvine)
- *Interactive and Automated Debugging of Big Data Analytics*, Muhammad Gulzar (UCLA)
- *Visualizing and Assessing Code Examples at Scale*, Tianyi Zhang (UCLA)
- *Systems Support for Sophisticated Program Analysis*, Zhiqiang Zuo (UC Irvine)
- *Investigating and Improving Immutability (Particularly C++ const)*, Jon Eyolfson (UC Irvine)
- *The Normalized Java Resource*, Christian Gram Kalhauge (UCLA)

12:05pm-2:00pm

Lunch and Poster Sessions (Hacienda Room, Faculty Center)

480 Charles E Young Dr E, Los Angeles, CA 90095

6 minutes walk from ENG VI.

- *Declarative Fence Insertion*, John Bender (UCLA)
- *Jones-Optimal Partial Evaluation*, Matt Brown (UCLA)
- *Calling-to-Reference Context Translation via Constraint-Guided CFL-Reachability*, Cheng Cai (UC Irvine)
- *Interactive and Automated Debugging of Big Data Analytics*, Muhammad Gulzar (UCLA)
- *The Normalized Java Resource*, Christian Kalhauge (UCLA)
- *BigSummary: Distributed Invariant Detection for Big Data Analytics*, Shaghayegh Mardani (UCLA)
- *Skyway: Connecting Managed Heaps in Distributed Big Data Systems*, Christian Navasca (UC Irvine)
- *Yak: A Big-Data-Friendly Garbage Collector*, Khanh Nguyen (UC Irvine)
- *Interactive Code Search using Inductive Logic Programming*, Aishwarya Sivaraman (UCLA)
- *Graspan: A Disk-based Single-Machine Graph System for Interprocedural Static Analysis of Large Systems Code*, John Thorpe (UC Irvine)
- *RStream: Marrying Relational Algebra with Streaming for Efficient Graph Mining on A Single Machine*, Kai Wang (UC Irvine)
- *Sentinel: Systems Support for Managed Communication in Smart Home IoT*, Bojun Wang (UC Irvine)
- *Visualizing and Assessing Code Examples in the Wild*, Tianyi Zhang (UCLA)
- *Automated Transplantation and Differential Testing for Code Clones*, Tianyi Zhang (UCLA)

2:00pm-3:20pm

External Visitor Talks

20 minutes each including questions

- *RETracer: Triaging Crashes by Reverse Execution from Partial Memory Dumps*, Weidong Cui (Principal Researcher and Research Manager, Security Group, Microsoft Research)
- *Compiler Techniques to Enhance Software Security*, Michael Franz (Chancellor Professor, UC Irvine)
- *AI, Programming Languages, and Reasoning*, Ben Zorn (Principal Researcher and Research Manager, RISE Group, Microsoft Research)
- *Overview of Challenges and Collaboration Opportunities at Huawei*, Hui Zang (Chief Scientist, FutureWei Technologies, Huawei)

3:20pm-3:35pm

Break

3:35pm-4:20pm

Feedback and Strategic Discussion (ENG VI, Room 466)

Private meeting among the PIs, Karno and Ryan

3:35pm-4:20pm

Brainstorming Session (Eng VI, Room 472)
Kim, Palsberg and Xu's students and postdocs

4:20pm-5:00pm

Discuss Collaboration Plans (ENG VI, Room 289)
Kim, Palsberg and Xu's students and postdocs

Parking Instruction:

Parking Structure 8 is the closest parking lot to Eng 6 where the meeting will be held. It is on 550 Westwood Plaza, Los Angeles CA 90095 and has a self-pay station. The price for all day parking is \$12.

Here is the Google Maps link for UCLA's Parking Structure 8

<https://www.google.com/maps/place/405+Hilgard+Ave+Parking+Structure+8,+Los+Angeles,+CA+90095/@34.0682512,-118.4488368,17z/data=!3m1!4b1!4m5!3m4!1s0x80c2bc85f5cb1e25:0xa83fc6fe0744151c!8m2!3d34.0682512!4d-118.4466481>

Here is another link for the walking direction from Parking Structure 8 to Eng 6:

<https://www.google.com/maps/dir/405+Hilgard+Ave+Parking+Structure+8,+Los+Angeles,+CA+90095/Engineering+IV/@34.0686227,-118.4475255,17z/data=!3m1!4b1!4m13!4m12!1m5!1m1!1s0x80c2bc85f5cb1e25:0xa83fc6fe0744151c!2m2!1d-118.4466481!2d34.0682512!1m5!1m1!1s0x80c2bc86217ff063:0x99d385184985fc0!2m2!1d-118.4440275!2d34.0687994>

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A List of Attendees:

Michael Aucoin	Clicktripz
John Bender	UCLA
Guy Van den Broeck	UCLA
Matt Brown	UCLA
Cheng Cai	UC Irvine
Kai-Wei Chang	UCLA
Mark Chavira	Google
Ryan Craven	Office of Naval Research
Weidong Cui	Microsoft Research
Jon Eyolfson	UC Irvine/Waterloo
Brendon Faleiro	UCLA
Michael Franz	UC Irvine
Ravi Gadhia	Github
Muhammad Gulzar	UCLA
William G.J. Halfond	USC
Won Jeon	Huawei
Christian Kalhauge	UCLA
Miryung Kim	UCLA
Saeed Maleki	Microsoft Research
Shaghayegh Mardani	UCLA
Monica McArthur	Google
Kathryn McKinley	Google
Sukarno Mertoguno	Office of Naval Research
Zeina Migeed	UCLA
Todd Millstein	UCLA
Yeoul Na	UC Irvine
Christian Navasca	UC Irvine
Dave Newhall	Clicktripz
Khanh Nguyen	UC Irvine
Owen O'Malley	Hortonworks
Jens Palsberg	UCLA
Debleena Sengupta	UCLA
Aishwarya Sivaraman	UCLA
John Thorpe	UC Irvine
Chen Tian	Huawei
Stijn Volckaert	UC Irvine
Chao Wang	USC
Kai Wang	UC Irvine
Bojun Wang	UC Irvine
Harry Xu	UC Irvine
Hui Zang	Huawei

Tianyi Zhang
Benjamin Zorn
Zhiqiang Zuo

UCLA
Microsoft Research
UC Irvine